

Digital Overstimulation and the Risks of Unsupervised Internet Use on Today's Youth

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ABSTRACT: *This paper explores the psychological and developmental risks associated with unsupervised access to technology among children. While digital devices and internet connectivity offer immediate mental stimulation and opportunities for self-directed learning, they are also designed to capture attention and encourage prolonged use—often at the expense of healthy development. Drawing on recent research, the paper argues that unrestricted access to smartphones and tablets can negatively impact a child's cognitive, social, and emotional growth.*

KEYWORDS – technology, self-directed, overuse, digital, exposure

I. INTRODUCTION

Humans are naturally drawn to a sense of pleasure and often reward themselves using stimuli that they have mentally connected to as positive over time. This is what motivates us to seek out interests, hobbies, and occupations. In the last two decades, the internet has become a source of controversy as it is both a source of pleasure and rewards and is designed to draw attention and provide immediate short-term stimulation while at the same time being viewed as addictive and toxic. The fact that technology is so convenient is a driving factor for the design of particular devices such as smartphones and tablets. These devices essentially are made to be attractive and, in a way, keep the user hooked on seeking content that results in a euphoric feeling. This attraction can be very effective on children, as noted in a study that highlights the psychological impacts of excessive screen time on development of young users (Muppalla et al., 2023).

To this end, unsupervised access to technology, specifically the internet, which can unintentionally lead to a heightened sense of dependence, is not beneficial for a child's development. Additionally, childhood addiction to technology has been researched as harmful to their psyche, social skills and physiology. Unsupervised use of technology can cultivate a sense of self-directed discovery and independence but also carries some potential risks. Research indicates that unmonitored technology use can lead to exposure to inappropriate content and unhealthy online behaviors (Muppalla et al., 2023). Even though it can be educational to give young users access to the internet the potentially harmful effects provide the context for moderation.

II. LITERATURE REVIEW

2.1 Unmoderated/Unsupervised Access

Unmoderated or unsupervised access to the internet can have adverse effects on a young developing mind and body. According to Noetel et al (2025) unsupervised internet use among children has been linked to a range of socioemotional and behavioral issues. Research also supports that excessive screen time has been linked

to increased feelings of depression, anxiety and even aggression in young users. In a study conducted by Noetel et al (2025) users under ten years of age also displayed increased signs of hyperactivity. Their study focused on 117 previous studies which were conducted. In that meta-analysis of the data it was also revealed that young users gravitated to increased screen time to cope with emotions and while their thought process was that social media and the use of the internet helped them to cope what was found is that it increased the negative emotions and led to more mental health issues. Sebre et al (2024) also found similar results in their study which focused on children with ADHD. Their study noted that individuals with ADHD had a higher risk of engaging in negative internet behavior and use. Research from the American Academy of Child and Adolescent Psychiatry (2025) focuses on the fact that unsupervised use of the internet can lead to increased stranger interaction in which users are exposed to explicit/inappropriate content; thus underscoring the importance of making sure that internet use is limited and supervised. Parents who give children access to the internet allow them to begin creating their digital footprint from a young age and this can have long-term implications for their privacy and safety and mental health.

2.2 Development or Under Development of Social Skills

Technology use, while offering many benefits, can significantly impact children's development and well-being, particularly when it becomes excessive. One major concern is the potential for hindering the development of important face-to-face social skills. Over-reliance on digital communication can make it difficult for children to navigate real-world interpersonal relationships (Cardoso-Leite et al., 2021). Theories about whether young users have lost their ability to communicate effectively due to technology have become popularized and circulated widely on social media with little scholarly research to support this assumption. One thought is that social skills are on the decline and that young people need certain skills to succeed. Some researchers believe there needs to be more research in this area. On the other hand, a study by Downey and Gibbs (2020) counters this assumption by showing how internet use can help to increase development and highlighting the potentially positive effects of internet usage on children. For example, researchers have observed how email and social media help students build and maintain social networks, enhance existing friendships, negotiate parent-child relationships, and link kids to online interest-driven groups that boost their creativity. One fact that most people agree with is the importance of social skills to young people's life success and that a balance of social media engagement and real-life interaction is necessary (Downey & Gibbs, 2020).

2.3 Well-being

Excessive smart device use, especially before bedtime, disrupts sleep patterns, leading to insufficient sleep and a host of associated health issues, including fatigue and difficulty concentrating. This lack of focus can then spill over into academic performance. Excessive screen time can distract children from homework and studying, leading to lower academic achievement and reduced attention spans. Constant use of fast-paced digital media can further diminish a child's ability to concentrate and focus on tasks for extended periods, making it harder to succeed in school. Early exposure to technology can even lead to addictive behaviors, with children developing a reliance on devices for emotional regulation and entertainment, creating a cycle of dependence that can be difficult to break. This dependence can also contribute to a more sedentary lifestyle, as children prioritize screen time over physical activity, contributing to obesity and associated health problems like diabetes and cardiovascular disease (Muppalla et al., 2023).

Beyond the physical and academic impacts, technology use can also affect children's emotional well-being and family dynamics. Exposure to idealized images on social media can contribute to body image issues and low self-esteem, particularly as children enter adolescence. Unmonitored screen time also increases the risk of exposure to violent, sexual, or otherwise inappropriate content, which can negatively influence behavior and attitudes. Children may struggle to set healthy boundaries around technology use, making it challenging for them to engage in offline activities. Finally, heightened engagement with social media increases the likelihood of experiencing or being involved in cyberbullying, with potentially long-lasting emotional effects. The frustration and dependence associated with technology use can also manifest as increased irritability and aggression,

especially when access to devices is restricted, creating further challenges for families and children alike (Takahashi, Obara, Ishikuro, et al (2023).

2.4 Literature Review Summary

Unmoderated or unsupervised access to technology poses significant risks to the mental, emotional, and social development of younger users. As noted by Noetel et al (2025) and Sebre et al (2024). While this has been significantly researched, there are also a number of researcher who have studied the positive effects of technology including ways that digital tools can support relationship building, learning, and encourage creativity. While prolonged use of the internet can lead to unhealthy habits what is underscored by the research is that healthy habits can be development and that a balance between supervision and unsupervised time necessary for young users to develop and sustain these healthy habits.

III. A THREE-PRONGED APPROACH TO FINDING BALANCE

By acknowledging the potential harms of excessive technology use, parents, educators, and caregivers can better understand the importance of managing screen time in children's lives. This three-pronged approach to finding balance can help to ensure that young users have the proper amount of supervision along with appropriate guidance for navigating internet usage on their own

3.1 Restrict Access to Technology

The first solution is to restrict access to technology and encourage engaging alternatives. This is not simply about removing devices—it's about replacing passive digital consumption with active, developmentally enriching experiences. Activities such as reading aloud from infancy help build language skills, expand vocabulary, and foster a lifelong love of books. As children grow, independent reading supports comprehension, critical thinking, and imagination. Similarly, physical play is essential for developing motor skills, coordination, and overall health. Age-appropriate toys, puzzles, and games promote spatial reasoning and problem-solving, while hobbies like music and art offer creative outlets. Social interaction through playdates and family gatherings helps children build essential interpersonal skills. These alternatives provide a well-rounded environment that supports healthy development and reduces reliance on screens (Noetel et al., 2025; Sebre et al., 2024; American Academy of Child and Adolescent Psychiatry, 2025).

3.1 Education and Regulation

The second solution focuses on education and regulation. Teaching children how to use technology responsibly is key to helping them develop a balanced relationship with digital media. This includes explaining the importance of balancing online and offline activities and how excessive screen time can affect their physical and mental health. Parents should model healthy tech habits, set clear rules, and create tech-free zones—such as during meals or before bedtime. Discussions about online safety, privacy, and respectful behavior are especially important as children grow older. Mindfulness practices like deep breathing can help children manage impulses and make thoughtful choices about screen use. When children understand the reasons behind these boundaries, they are more likely to adopt healthier habits. Education empowers children to self-regulate and make informed decisions about their technology use (Cardoso-Leite et al., 2021; Downey & Gibbs, 2020).

3.1 Positive Reinforcement

The third solution centers on positive reinforcement to promote healthy tech habits. Celebrating children's efforts to balance screen time with other activities encourages continued progress. This can include verbal praise, small rewards, or special privileges tailored to the child's interests. Visual tools like charts or checkbooks can help younger children track their progress and stay motivated. The focus should be on recognizing effort and improvement, not perfection. For example, if a child chooses to play outside instead of using a tablet,

that decision should be acknowledged—even if they use the device later (Muppalla et al., 2023; Takahashi et al., 2023). This approach shifts the narrative from restriction to encouragement, helping children build sustainable habits and positive associations with offline activities

IV. CONCLUSION

While abstaining from internet use during childhood and adolescence is nearly impossible in a growingly connected world there are ways to ensure that the use of the internet and associated technologies does not have a drastically negative effect on a child's development. While the research acknowledges development issues connected to internet dependency like impaired social development, poor academic performance and a host of mental health challenges, the internet is not without its merits. Children need guidance in their development to become well-rounded individuals and in a technologically savvy environment, teaching about technology is a necessary part of that development. A shift from allowing children to have excessive unsupervised access to the internet and allowing devices to be babysitters is imperative. Rather than just handing children devices, there should be training and guidance that is age appropriate so that they have an opportunity to grow and learn to self-manage their use in a way that is balanced and productive. Possible applications of this paper include the implementation of the three-pronged approach to finding balance. Even as early as in the K12 environment, students can be taught to engage in healthier internet use and impose their own restrictions so that they are not consumed by online content. With age, comes added responsibility however if there are targeted efforts to provide health restrictions early on, students will be able to develop strong self-regulation skills as they get older, allowing them to navigate the internet safely, responsibly, and with greater independence.

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